Electrical Inspector, Step 1

Step 1

At step one a probationary inspector possessing solely a UDC Electrical license would be responsible for inspections of one and two family homes. During the employees probationary period a focus on policy, procedure, ordinances, and using Accela proficiently will be the primary objective.

New hires usually are placed at step one until they meet the minimum requirements and qualifications to advance to the next step.

To move to pay step two, an inspector at step one must obtain the following inspection credentials as outlined in the job description and mandated by the State of Wisconsin:

1. ***State of Wisconsin Commercial Electrical Inspection Certification***
2. ***State of Wisconsin Uniform Dwelling Code Electrical Inspection Certification***

An inspector holding these credentials upon entering the City of Milwaukee Electrical Inspection section, with supervisor and DNS administrative approval, may be eligible for appointment to a higher career ladder step (based on certifications held at the time of appointment) with the one year probationary period waived for the sole purposes of this Career Ladder. Separate probationary period requirements mandated by the Department of Employee Relations still apply.

Secondly, inspector must demonstrate a thorough knowledge pertaining to the fundamentals of performing basic inspections as they relate to good communication, construction methodologies, code knowledge, problem solving and code interpretation and its enforcement. Listed below is a representation of the core competencies that an inspector must have a thorough knowledge of:

General Competencies

- *Knowledge of Electrical construction practices and techniques*
- *Knowledge of codes, methods, materials and tests used in construction of Electrical*
- *Knowledge of the inspection methods for Electrical and ability to perform inspections to ensure code compliance*
- *Knowledge of safe working practices*
- *Skill in reading and recognizing violations of all applicable Electrical codes*
- *Skill in preparing analytical reports on compliance with standards and codes*
- *Ability to make sound technical decisions independently*
- *Ability to communicate diplomatically with the public, public officials, and other skilled trades people*
- *Ability to maintain detailed records*
- *Management and Control of Assigned District*
- *Ability to coordinate with other DNS and City Entities*
- *Ability to Evaluate and Interpret Construction Plans*
- *Thorough knowledge of the Milwaukee Code of Ordinances*
- *Code Administration and Definitions of 1&2 Family and commercial Codes*
- *Familiarity of DNS processes and skill set with regards to computer programs.*

State Electrical Inspector Competencies

- *Electrical inspection of public buildings and places of employment*
- *Use of approved materials and construction methods*
- *Electric fences*
- *Adoption of standards*
- *Branch circuits*
- *Branch circuit, feeder, and service calculations*
- *Outside branch circuits and feeders*
- *Services*
- *Grounding and bonding*
- *Wiring methods*
- *Conductors for general wiring*
- *Cabinets, cutout boxes, and meter socket enclosures*
- *Outlet, device, pull and junction boxes*
- *Conduit bodies*
- *Fittings and hand hole enclosures*
- *Non-metallic – sheathed cable*
- *Uses permitted*
- *Flexible cords and cables*
- *Receptacles, cord connectors and attachment plugs*
- *Commercial garages, repair and storage*
- *Agricultural buildings*
- *Elevators, dumbwaiters, escalators, moving walks, platform lifts, and stairway chairlifts*
- *Electrically driven or controlled irrigation machines*
- *Swimming pools, fountains and similar installations*
- *Emergency systems*
- *Legally required standby systems*
- *Overhead service conductors*
- *Underground service conductors*
- *Service entrance conductors*
- *Service equipment*
- *Overcurrent protection*
- *Disconnecting and guarding overcurrent protection*
- *Plug fuses, fuse holders and adapters*
- *Cartridge fuses and fuse holders*
- *Circuit breakers*
- *Supervised industrial installations*
- *Grounding electrode systems*
- *Methods of equipment grounding*
- *Direct current systems*
- *Instruments, meters, and relays*
- *Meter sockets*
- *Armored cable*
- *Flat cable assemblies*
- *Flat conductor cable*
- *Integrated gas spacer cable*
- *Medium voltage cable*
- *Metal-clad cable*
- *Mineral insulated / metal sheathed cable*
- *Nonmetallic sheathed cable*
- *Power and control tray cable*
- *Service entrance cable*
- *Underground feeder and branch circuit*
- *Intermediate metal conduit*
- *Rigid metal conduit*
- *Flexible metal conduit*
- *Liquid tight flexible metal conduit*
- *Rigid polyvinyl chloride conduit*
- *High density polyethylene conduit*
- *Underground conduit with conductors*
- *Reinforced thermosetting resin*
- *Electrical nonmetallic tubing*
- *Manufactured buildings*
- *Mobile homes, manufactured homes, and mobile parks*
- *Recreational vehicles and recreational vehicle parks*
- *Park trailers*

- *Floating buildings*
- *Marinas and boatyards*
- *Temporary installations*
- *Electric signs and outline lighting*
- *Manufactured wiring systems*
- *Office furnishings*
- *Cranes and hoists*
- *Travelling cables*
- *Machine rooms, control rooms, machinery spaces, and control spaces*
- *Emergency power systems*
- *Electric welders*
- *Arc welders*
- *Resistance welders*
- *Welding cable*
- *X-ray equipment*
- *Permanent audio system installations*
- *Pipe organs*
- *Electrolytic cells*
- *Electroplating*
- *Swimming pools, fountains and similar installations*
- *Natural and artificially made bodies of water*
- *Solar photovoltaic systems*
- *Fuel cell systems*
- *Small wind electric systems*
- *Fire pumps*
- *Emergency system circuits for lighting and power*
- *Emergency light*
- *Legally required standby power systems*
- *Critical operations power systems*
- *Low voltage systems*
- *High voltage systems*
- *Communications systems*
- *Optical fiber cables and raceways*
- *Fire alarm systems*
- *Non-power-limited fire alarm circuits*
- *Power-limited fire alarm circuits*
- *Community antenna television and radio distribution systems*
- *Radio equipment*
- *Amateur and citizen band transmitting and receiving stations*
- *Antenna systems*
- *Interior installation – transmitting stations*

Additionally, an inspector must meet or exceed the thresholds for advancement established in the ***Quantitative Core Competencies.***

Additional Steps.

After attainment of job required certifications and licensure as required in the job description along with supervisor and DER approval the inspector may begin advancing in the career ladder. The below listed steps may be achieved in any order.

In order to advance to pay step 2 using Step options 2-6, the inspector must have achieved the Step 1 requirements and be able to provide evidence of completion for one of the below listed Qualitative Steps.

In order to advance to pay step 3 using Step options 2-6, the inspector must have achieved the Step 1 requirements and be able to provide evidence of completion for two of the below listed Qualitative Steps.

In order to advance to pay step 4 using Step options 2-6, the inspector must have achieved the Step 1 requirements and be able to provide evidence of completion for three of the below listed Qualitative Steps.

In order to advance to pay step 5 using Step options 2-6, the inspector must have achieved the Step 1 requirements and be able to provide evidence of completion for four of the below listed Qualitative Steps.

In order to advance to pay step 6 using Step options 2-6, the inspector must have achieved the Step 1 requirements and be able to provide evidence of completion for five of the below listed Qualitative Steps.

In each case above, for advancement to a higher pay step, the inspector shall obtain the required Qualitative and Quantitative measures associated with the step they are requesting. The quantitative core competencies must be achieved in the sequential order as outlined in the Quantitative Core Competencies document. In addition, inspector's performance, customer service, job skill and knowledge is subject to review by the supervisor for applicability for the step being requested and the time frame to be analyzed taking into consideration training, specialty projects, inspector workload, district composition, and other factors that may have an impact on performance.

Electrical Inspector, Step Option 2

To advance a step using step option two, an inspector shall obtained the job required certifications/licensure as outlined in step one. Step option two requires the inspector to obtain the following inspection credentials or certification issued by the State of Wisconsin:

1. ***State of Wisconsin UDC Construction Inspector Certification***

An inspector using step option two must demonstrate a thorough knowledge pertaining to the fundamentals of performing UDC inspections. These certifications requirements are intended to represent a mastery in a particular subject that will continue to be built upon in the other career ladder steps.

Listed below is a representation of the core competencies that an inspector must have a thorough knowledge of to advance using this step option:

1 &2 Family Uniform Dwelling Code (UDC) Competencies

Construction

- *Design Criteria*
- *Loads & Materials*
- *Exits*
- *Interior Circulation*
- *Stairways & Elevated Areas*
- *Ladders*
- *Ramps*
- *Natural Light & Ventilation*
- *Ceiling Height*
- *Attic & Crawl Spaces*
- *Fire Separation & Dwelling Unit Separation*
- *Fire blocking*
- *Smoke Detectors*
- *Automatic Fire Sprinklers*
- *Protection Against Decay & Termites*
- *Foam Plastic*
- *Installation of Elevators or Dumbwaiters*

- *Excavations*
- *Erosion Control & Sediment Control*
- *Storm Water Management*
- *Excavations Adjacent To Adjoining Property*
- *Excavations For Footings & Foundations*
- *Footings*
- *Frost Protection*
- *Drain Tiles*
- *Foundations*
- *Floor Design*
- *Concrete Floors*
- *Garage Floors*
- *Wood Floors in Contact With The Ground*
- *Precast Concrete Floors*
- *Wood Frame Floors*
- *Decks*
- *Wall Design*
- *Exterior Covering*
- *Wood Frame Walls*
- *Masonry Walls*
- *Roof Design*
- *Roof & Ceiling Wood Framing*
- *Masonry Fireplaces*
- *Masonry Chimneys*
- *Factory-Built Fireplaces*
- *Construction in Floodplains*
- *Installation Standards of Manufactured Homes*

These Skills and certifications build on important priorities of the building code that the inspector should already be familiar with and encounter on a regular basis in public buildings.

Additionally, an inspector advancing in the career ladder must meet or exceed the thresholds for advancement established in the ***Quantitative Core Competencies.***

Electrical Inspector, Step Option 3

To advance a step using step option three, an inspector shall have completed the one year probation period, obtained the job required certifications/licensure as outlined in step one. Step option three requires the inspector to obtain the following inspection credentials or certification issued by the State of Wisconsin DSPS:

1) ***State of Wisconsin UDC HVAC Inspector Certification***

An inspector using step option three must demonstrate a thorough knowledge pertaining to the fundamentals of performing UDC HVAC inspections. These certifications requirements are intended to represent a mastery in a particular subject that will continue to be built upon in the other career ladder steps.

Listed below is a representation of the core competencies that an inspector must have a thorough knowledge of to advance using this step option:

Heating, Ventilating & Air-Conditioning Design

- *Selection of Heating Equipment*
- *Types & Location of Equipment*
- *Solid-Fuel Burning Equipment*
- *Safety Controls*
- *Combustion Air*
- *Mechanical Draft Systems*
- *Equipment Maintenance Information*
- *Air Distribution Systems*
- *Ductwork*
- *Damper, Registers & Grills*
- *Piping*
- *Factory-Built Chimneys or Vents*
- *Gas Vents*
- *Chimney Connectors, Smoke Pipes & Stovepipes*
- *Multiple Appliance Venting*
- *Condensate Drains*
- *Fuel Storage & Supply Systems*
- *Equipment Location and Operation*

These Skills and certifications build on important priorities of the building code that the inspector should already be familiar with and encounter on a regular basis in public buildings.

Additionally, an inspector advancing in the career ladder must meet or exceed the thresholds for advancement established in the ***Quantitative Core Competencies.***

Electrical Inspector, Step Option 4

To advance a step using step option four, an inspector shall have completed the one year probation period, obtained the job required certifications/licensure as outlined in step one. Step option four requires the inspector to obtain the following inspection credentials or certification issued by the National Fire Protection Association (NFPA) or National Institute for Certification in Engineering Technologies (NICET) or State of Wisconsin DSPS:

1. ***NICET Level 1 Certification – Fire Alarm Systems Certification***
   or
2. ***State of Wisconsin Fire detection prevention & Suppression inspector certification,(fire inspector 1 equivalent)***
   or
3. ***NFPA Fire inspector I***

Secondly, an inspector using this step must demonstrate a thorough knowledge and mastery pertaining to the field of Electrical inspection. In addition, it is necessary to be familiar with the fire life safety components of commercial facilities. These credential requirements are intended to be comprehensive and fully develop an inspectors understanding of the intricate nature of the systems they are looking at. These components are found in some of the Listed below is a representation of the core competencies that an inspector must have a thorough knowledge of to advance using this step option:

NFPA - Certified Fire Inspector 1 - Core Competencies

- *This duty involves the preparation of correspondence and inspection reports, handling of complaints, and maintenance of records, as well as participation in legal proceedings and maintenance of an open dialogue with the plan examiner and emergency response personnel, according to the following job performance requirements.*
- *Compute the allowable occupant load of a single-use occupancy or portion thereof, given a detailed description of the occupancy, so that the calculated allowable occupant load is established in accordance with applicable codes and standards.*
- *Occupancy classification; applicable codes, regulations, and standards adopted by the jurisdiction; operational features; fire hazards presented by various occupancies; and occupant load factors.*
- *The ability to calculate occupant loads, identify occupancy factors related to various occupancy classifications, use measuring tools, and make field sketches.*
- *Inspect means of egress elements, given observations made during a field inspection of an existing building, so that means of egress elements are maintained in compliance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.*
- *Applicable codes and standards adopted by the jurisdiction related to means of egress elements, maintenance requirements of egress elements, types of construction, occupancy egress requirements, and the relationship of fixed fire protection systems to egress requirements and to approved means of egress elements, including, but not limited to, doors, hardware, and lights.*
- *The ability to observe and recognize problems, calculate, make basic decisions related to means of egress, use measuring tools, and make field sketches.*
- *Verify the type of construction for an addition or remodeling project, given field observations or a description of the project and the materials being used, so that the construction type is identified and recorded in accordance with the applicable codes and standards and the policies of the jurisdiction.*
- *Applicable codes and standards adopted by the jurisdiction, types of construction, rated construction components, and accepted building construction methods and materials.*
- *Determine the operational readiness of existing fixed fire suppression systems, given test documentation and field observations, so that the systems are in an operational state, maintenance is documented, and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.*
- *A basic understanding of the components and operation of fixed fire suppression systems and applicable codes and standards.*
- *Determine the operational readiness of existing fire detection and alarm systems, given test documentation and field observations, so that the systems are in an operational state, maintenance is documented, and deficiencies are identified, documented, and reported in accordance with the policies of the jurisdiction.*
- *A basic understanding of the components and operation of fire detection and alarm systems and devices and applicable codes and standards.*
- *Determine the operational readiness of existing portable fire extinguishers, given field observations and test documentation, so that the equipment is in an operational state, maintenance is documented, and deficiencies are identified, documented, and reported in accordance with the policies of the jurisdiction.*

- *A basic understanding of portable fire extinguishers, including their components and placement, and applicable codes and standards.*
- *Recognize hazardous conditions involving equipment, processes, and operations, given field observations, so that the equipment, processes, or operations are conducted and maintained in accordance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.*
- *Practices and techniques of code compliance inspections, fire behavior, fire prevention practices, ignition sources, safe housekeeping practices, and classification of hazardous materials.*
- *Compare an approved plan to an existing fire protection system, given approved plans and field observations, so that any modifications to the system are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.*
- *Fire protection symbols and terminology.*
- *The ability to read and comprehend plans for fire protection systems, observe, communicate, apply codes and standards, recognize problems, and make decisions.*
- *Verify that emergency planning and preparedness measures are in place and have been practiced, given field observations, copies of emergency plans, and records of exercises, so that plans are prepared and exercises have been performed in accordance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.*
- *Requirements relative to emergency evacuation drills that are required within the jurisdiction, ways to conduct and/or evaluate fire drills in various occupancies, and human behavior during fires and other emergencies.*
- *The ability to identify the emergency evacuation requirements contained in the applicable codes and standards and interpret plans and reports.*
- *Inspect emergency access for an existing site, given field observations, so that the required access for emergency responders is maintained and deficiencies are identified, documented, and corrected in accordance with the applicable codes, standards, and policies of the jurisdiction.*
- *Applicable codes and standards, the policies of the jurisdiction, and emergency access and accessibility requirements.*
- *The ability to identify the emergency access requirements contained in the applicable codes and standards, observe, make decisions, and use measuring tools.*
- *Verify code compliance for incidental storage, handling, and use of flammable and combustible liquids and gases, given field observations and inspection guidelines from the AHJ, so that applicable codes and standards are addressed and deficiencies are identified, documented, in accordance with the applicable codes and standards and the policies of the jurisdiction.*
- *Classification, properties, labeling, storage, handling, and use of incidental amounts of flammable and combustible liquids and gases.*
- *Verify code compliance for incidental storage, handling, and use of hazardous materials, given field observations, so that applicable codes and standards for each hazardous material encountered are addressed and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.*
- *Classification, properties, labeling, transportation, storage, handling, and use of hazardous materials.*
- *Recognize a hazardous fire growth potential in a building or space, given field observations, so that the hazardous conditions are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.*
- *Basic fire behavior; flame spread and smoke development ratings of contents, interior finishes, building construction elements, decorations, decorative materials, and furnishings; and safe housekeeping practices.*
- *Determine code compliance, given the codes, standards, and policies of the jurisdiction and a fire protection issue, so that the applicable codes, standards, and policies are identified and compliance is determined.*

- *Basic fire behavior; flame spread and smoke development ratings of contents, interior finishes, building construction elements, life safety systems, decorations, decorative materials, and furnishings; and safe Housekeeping practices.*
- Verify fire flows for a site, given fire flow test results and water supply data, so that required fire flows are in accordance with applicable codes and standards and deficiencies are identified, documented, and reported in accordance with the applicable codes and standards and the policies of the jurisdiction.
- Types of water distribution systems and other water sources in the local community, water distribution system testing, characteristics of public and private water supply systems, and flow testing procedures.
- The ability to use Pitot tubes, gauges, and other data gathering devices as well as calculate and graph fire flow results.

NICET Level 1 – Fire Alarm Systems Certification

- *Representation of system components, cabling, and dimensions on system drawings*
- *Terminology related to basic components and installation operations*
- *Roles of codes and standards in fire alarm*
- *systems work*
- *Scopes of the IBC, IFC, and IRC*
- *Scopes of NFPA 1 and 101 codes*
- *Scopes of NFPA 70 and 72 standards*
- *Types of fire alarm systems and associated devices*
- *Tools required for mounting and connecting fire alarm system components, and their operation*
- *Materials required for mounting cables and devices*
- *Functions performed in a fire alarm system by manual fire alarm boxes, automatic fire detection devices, audible signaling appliances, visible signaling appliances, and annunciators; and how they are operated*
- *Representation of system components, cabling, and dimensions on system drawings*
- *Tools required for mounting cables, wires, conduit, and fixtures, and their operation*
- *Types of outlet and junction boxes and their Applications*
- *Types of wire and cable, and their applications*
- *Types of conduit and their applications*
- *Materials required for mounting cables*
- *OSHA Publications*
- *American Red Cross First Aid and Safety Handbook*
- *Potential hazards associated with hand and power tools*
- *Potential hazards associated with electrical cables and equipment*
- *Materials that require special handling and/or disposal methods*
- *Potential hazards associated with lifts, ladders, and other equipment*
- *Purpose and operation of basic test equipment*
- *NFPA 72 test and inspection form*

These Skills and certifications build on important priorities of the building code that the inspector should already be familiar with and encounter on a regular basis in public buildings.

Additionally, an inspector advancing in the career ladder must meet or exceed the thresholds for advancement established in the ***Quantitative Core Competencies.***

Electrical inspector, Step Option 5

To advance a step using step option five, an inspector shall have completed the one year probation period, obtained the job required certifications/licensure as outlined in step one. Step option five requires the inspector to obtain the following inspection credentials or certification issued by the State of Wisconsin DSPS:

1) State of Wisconsin Master Electrician License

*An inspector using step option five must demonstrate a thorough knowledge pertaining to the fundamentals residential HVAC systems and requirements. T*his certification requirements are intended to represent general understanding of HVAC systems that will continue to be built upon in the other career ladder steps.

Listed below is a representation of the core competencies that an inspector must have a thorough knowledge of to advance using this step option:

Master Electrician Competencies

- *Adoption of standards*
- *Agricultural buildings*
- *Amateur and citizen band transmitting and receiving stations*
- *Antenna systems*
- *Arc welders*
- *Armored cable*
- *Branch circuit, feeder, and service calculations*
- *Branch circuits*
- *Cabinets, cutout boxes, and meter socket enclosures*
- *Cartridge fuses and fuse holders*
- *Circuit breakers*
- *Commercial garages, repair and storage*
- *Communications systems*
- *Community antenna television and radio distribution systems*
- *Conductors for general wiring*
- *Conduit bodies*
- *Cranes and hoists*

- *Critical operations power systems*

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- *Disconnecting and guarding overcurrent protection*
- *Electric fences*
- *Electric signs and outline lighting*
- *Electric welders*
- *Electrical inspection of public buildings and places of employment*
- *Electrical nonmetallic tubing*
- *Electrically driven or controlled irrigation machines*
- *Electrolytic cells*
- *Electroplating*
- *Elevators, dumbwaiters, escalators, moving walks, platform lifts, and stairway chairlift*
- *Emergency light*
- *Emergency power systems*
- *Emergency system circuits for lighting and power*
- *Emergency systems*
- *Fire alarm systems*
- *Fire pumps*
- *Fittings and hand hole enclosures*
- *Flat cable assemblies*
- *Flat conductor cable*
- *Flexible cords and cables*
- *Flexible metal conduit*
- *Floating buildings*
- *Fuel cell systems*
- *Grounding and bonding*
- *Grounding electrode systems*
- *High density polyethylene conduit*
- *High voltage systems*
- *Instruments, meters, and relays*
- *Integrated gas spacer cable*
- *Interior installation – transmitting stations*
- *Intermediate metal conduit*
- *Legally required standby power systems*

- *Legally required standby systems*
- *Liquid tight flexible metal conduit*
- *Low voltage systems*
- *Machine rooms, control rooms, machinery spaces, and control spaces*
- *Manufactured buildings*
- *Manufactured wiring systems*
- *Marinas and boatyards*
- *Medium voltage cable*
- *Metal-clad cable*
- *Meter sockets*
- *Methods of equipment grounding*
- *Mineral insulated / metal sheathed cable*
- *Mobile homes, manufactured homes, and mobile parks*
- *Natural and artificially made bodies of water*
- *Non-metallic – sheathed cable*
- *Nonmetallic sheathed cable*
- *Non-power-limited fire alarm circuits*
- *Office furnishings*
- *Optical fiber cables and raceways*
- *Outlet, device, pull and junction boxes*
- *Outside branch circuits and feeders*
- *Overcurrent protection*
- *Overhead service conductors*
- *Park trailers*
- *Permanent audio system installations*
- *Pipe organs*
- *Plug fuses, fuse holders and adapters*
- *Power and control tray cable*
- *Power-limited fire alarm circuits*
- *Radio equipment*
- *Receptacles, cord connectors and attachment plugs*
- *Recreational vehicles and recreational vehicle parks*
- *Reinforced thermosetting resin*
- *Resistance welders*
- *Rigid metal conduit*

- *Rigid polyvinyl chloride conduit*
- *Service entrance cable*
- *Service entrance conductors*
- *Service equipment*
- *Services*
- *Small wind electric systems*
- *Solar photovoltaic systems*
- *Supervised industrial installations*
- *Swimming pools, fountains and similar installations*
- *Swimming pools, fountains and similar installations*
- *Temporary installations*
- *Travelling cables*
- *Underground conduit with conductors*
- *Underground feeder and branch circuit*
- *Underground service conductors*
- *Use of approved materials and construction methods*
- *Uses permitted*
- *Welding cable*
- *Wiring methods*
- *X-ray equipment*
- *Installation practices and standards.*

These Skills and certifications build on important priorities of the building code that the inspector should already be familiar with and encounter on a regular basis in public buildings.

*Additionally, an inspector advancing in the career ladder must meet or exceed the thresholds for advancement established in the **Quantitative Core Competencies**.*

Electrical Inspector, Step Option 6

*To advance a step using step option six, an inspector shall have completed the one year probation period, obtained the job required certifications/licensure as outlined in step one. Step option six requires the inspector must successfully complete **one** the following inspection credentials issued by the International Code Council (ICC), or through other means described below:*

1. ***International Code Council Certification***
   ICC – Certified Building Official (CBO)
   a. ***Management Module***
   b. ***Legal Module***
   c. ***Building Codes and Standards Module***
   OR
2. ***Have obtained an associate's degree in engineering, architecture, construction management, construction technology or a field closely related to construction.***

OR

3. ***Have successfully completed 60 college credits of which a minimum of 39 credits are job-related or engineering-related, architectural design-related or construction management related.***
   OR
4. ***Have obtained a Bachelor's degree in engineering, architecture, architectural engineering, construction management, construction technology, mechanical engineering, or a field closely related to construction.***
   OR
5. ***Have obtained licensure through the State of Wisconsin as a Designer of Electrical Systems, Professional Engineer or Registered as an Architect.***

Listed below is a representation of the core competencies that an inspector must have a thorough knowledge of to advance using step option 6:

ICC –Certified Building Official or Equivalent

Legal Module

Financial Management

- *Budgets And Financing*
- *Implementation Of Financial Checks*
- *Verification Of Revenue Generation And Expenditures*

Records Management

- *Maintenance Of Employment Records*
- *Code Enforcement Records*

Personnel Management

- *Job Descriptions And Personnel Equipment*
- *Personnel Supervision*
- *Time-Management Efficiency*
- *Anti-Discrimination*
- *Employee Working Conditions*
- *Employee Discipline And Grievance*
- *Employee Professional Development*

Interagency, Legislative, and Public Communication

- *Code Adoption And Amendments*
- *Alternative Methods Through Appeals*
- *Interagency Cooperation*
- *Public Service And Information*

Code Enforcement

- *Permits, Notices And OrdersRight Of Entry*
- *Hazard Abatement*
- *Tort Liability*
- *Legal Due Process*
- *Court Prosecution*

Technology Module

- *Architectural Plan Review*
- *Use And Occupancy Classification*
- *Construction Classification*
- *Means Of Egress Provisions*
- *Light, Ventilation And Sanitation Provisions*
- *Fire Resistance And Fire Protection Provisions*

- *Accessibility Provisions*
- *Environmental And Natural Hazard Provisions*
- *Special Use/Occupancy Provisions*

Structural Plan Review

- *Structural Provisions*
- *Material Standards And Construction Methods*

Building System Plan Review

- *Mechanical Provisions*
- *Plumbing Provisions*
- *Electrical Provisions*

Field Inspection

- *Site Inspection*
- *Foundation Inspection*
- *Structural Frame Inspection*
- *Building Envelope Inspection*
- *Electrical Inspections*
- *Plumbing Inspection*
- *Mechanical Inspection*
- *Fire Protection Inspection*
- *Final Building Inspection*

These Skills and certifications build on important priorities of the building code that the inspector should already be familiar with and encounter on a regular basis in public buildings.

Additionally, an inspector must meet or exceed the thresholds for advancement established in the ***Quantitative Core Competencies.***